



**ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830**
**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

<b>1.1</b>	<b>Product identifier</b> Product Name	M-Bond GA-61 (Part A)
<b>1.2</b>	<b>Relevant identified uses of the substance or mixture and uses advised against</b> Identified Use(s) Uses Advised Against	Adhesives Anything other than the above.
<b>1.3</b>	<b>Details of the supplier of the safety data sheet</b> Company Identification  Telephone Fax E-Mail (competent person)	VISHAY MEASUREMENTS GROUP UK LTD Stroudley Road Basingstoke Hampshire RG24 8FW United Kingdom +44 (0) 1256 462131 +44 (0) 1256 471441 <a href="mailto:mm.uk@vishaypg.com">mm.uk@vishaypg.com</a>
<b>1.4</b>	<b>Emergency telephone number</b> Emergency Phone No. Languages spoken	(00-1) 703-527-3887 All official European languages.
		CHEMTREC (24 hours)

**SECTION 2: HAZARDS IDENTIFICATION**

<b>2.1</b>	<b>Classification of the substance or mixture</b>	
<b>2.1.1</b>	<b>Regulation (EC) No. 1272/2008 (CLP)</b>	Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 Aquatic Chronic 2; H411
<b>2.2</b>	<b>Label elements</b> Product Name Contains:  Hazard Pictogram(s)	According to Regulation (EC) No. 1272/2008 (CLP) M-Bond GA-61 (Part A) Polyglycidyl Ether of Phenol-Formaldehyde and bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight $\leq$ 700)
		 
	Signal Word(s)	WARNING
	Hazard Statement(s)	H315: Causes skin irritation. H317: May cause an allergic skin reaction. H319: Causes serious eye irritation. H411: Toxic to aquatic life with long lasting effects.
	Precautionary Statement(s)	P264: Wash hands and exposed skin thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. P302+P352: IF ON SKIN: Wash with plenty of water. P332+P313: If skin irritation occurs: Get medical advice/attention. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical advice/attention.

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2.3 Other hazards None known.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

3.1 Substances Not applicable

3.2 Mixtures

EC Classification Regulation (EC) No. 1272/2008 (CLP)

Chemical identity of the substance	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard Statement(s)
Polyglycidyl Ether of Phenol-Formaldehyde	<96	28064-14-4	608-164-0	Not yet assigned in the supply chain	Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 Aquatic Chronic 2; H411
Talc*	5 - 10	14807-96-6	238-877-9	Not yet assigned in the supply chain	Not classified
bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight $\leq$ 700)	10	25068-38-6	500-033-5	Not yet assigned in the supply chain	Skin Irrit. 2; H315 (SCL: C $\geq$ 5 %) Skin Sens. 1; H317 Eye Irrit. 2; H319 (SCL: C $\geq$ 5 %) Aquatic Chronic 2; H411

For full text of H/P Statements see section 16. \*Substance with a national exposure limit

**SECTION 4: FIRST AID MEASURES**


4.1 Description of first aid measures

Self-protection of the first aider

Use personal protective equipment as required. Wear appropriate personal protective equipment, avoid direct contact. Ensure adequate ventilation. Avoid breathing vapours. Avoid contact with skin and eyes. Contaminated clothing should be laundered before reuse.

Inhalation

IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.

Skin Contact

IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.

Eye Contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Ingestion

Rinse mouth. Obtain medical attention if symptoms appear or if large quantities have been ingested. Do not induce vomiting unless instructed to do so by medical personnel.

4.2 Most important symptoms and effects, both acute and delayed

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

**SECTION 5: FIRE-FIGHTING MEASURES**

5.1 Extinguishing media

Suitable Extinguishing Media  
Unsuitable extinguishing Media

Extinguish with carbon dioxide, dry chemical, foam or waterspray.  
Do not use water jet.

5.2 Special hazards arising from the substance or

Not flammable but will support combustion. May decompose in a fire giving off

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<p><b>5.3</b>      <b>mixture</b> <b>Advice for fire-fighters</b></p>	<p>toxic fumes. Carbon monoxide, Carbon dioxide. Phenolics Fight fire with normal precautions from a reasonable distance. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Keep containers cool by spraying with water if exposed to fire. Avoid release to the environment.</p>
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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

<p><b>6.1</b>      <b>Personal precautions, protective equipment and emergency procedures</b></p>	<p>Caution - spillages may be slippery. Ensure operatives are trained to minimise exposures. Ensure suitable personal protection during removal of spillages. Eliminate sources of ignition. Shut off leaks if without risk. Avoid contact with skin and eyes. Ensure adequate ventilation. Avoid breathing vapours.</p>
<p><b>6.2</b>      <b>Environmental precautions</b></p>	<p>Avoid release to the environment. Do not allow to enter drains, sewers or watercourses.</p>
<p><b>6.3</b>      <b>Methods and material for containment and cleaning up</b></p>	<p>Provided it is safe to do so, isolate the source of the leak. Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Dispose of this material and its container as hazardous waste. Allow small spillages to evaporate provided there is adequate ventilation.</p>
<p><b>6.4</b>      <b>Reference to other sections</b></p>	<p>See Section: 8, 13</p>

**SECTION 7: HANDLING AND STORAGE**

<p><b>7.1</b>      <b>Precautions for safe handling</b></p>	<p>Ensure operatives are trained to minimise exposures. Ensure adequate ventilation. Avoid inhalation of high concentrations of vapours. In case of inadequate ventilation wear respiratory protection. Avoid contact with skin and eyes. Wear protective gloves/eye protection. This product should be kept away from naked flames and other sources of ignition. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work.</p>
<p><b>7.2</b>      <b>Conditions for safe storage, including any incompatibilities</b></p>	<p>Keep container tightly closed. Bund storage facilities to prevent soil and water pollution in the event of spillage. Store in a cool/low-temperature, well-ventilated (dry) place away from heat and ignition sources.</p>
<p>Storage temperature Storage life Incompatible materials</p>	<p>&lt;27°C Stable under normal conditions.</p>
<p><b>7.3</b>      <b>Specific end use(s)</b></p>	<p>Keep away from: Oxidizing agents, Avoid contact with acids and alkalis. Amines See Section: 1.2.</p>

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

- 8.1**      **Control parameters**  
**8.1.1**    **Occupational Exposure Limits**

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m <sup>3</sup> )	STEL (ppm)	STEL (mg/m <sup>3</sup> )	Note
Talc	14807-96-6	-	1	-	-	WEL, Respirable Dust

Source: WEL: Workplace Exposure Limit (UK HSE EH40)

<p><b>8.1.2</b>    <b>Biological limit value</b></p>	<p>Not established.</p>
<p><b>8.1.3</b>    <b>PNECs and DNELs</b></p>	<p>Not established.</p>
<p><b>8.2</b>      <b>Exposure controls</b></p>	
<p><b>8.2.1</b>    <b>Appropriate engineering controls</b></p>	<p>Ensure operatives are trained to minimise exposures. Ensure adequate ventilation. Atmospheric levels should be controlled in compliance with the occupational exposure limit.</p>
<p><b>8.2.2</b>    <b>Individual protection measures, such as personal protective equipment (PPE)</b></p>	<p>General hygiene measures for the handling of chemicals are applicable. Keep good industrial hygiene. Avoid contact with skin and eyes. Avoid breathing</p>

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vapours. Wash hands before breaks and after work. Keep work clothes separately. Do not eat, drink or smoke at the work place. IF exposed: Flush with fresh water if contact with skin or eyes.

Eye/face protection



Wear protective eye glasses for protection against liquid splashes. Wear eye protection with side protection (EN166).

Skin protection



**Hand protection:**

Wear impervious gloves (EN374). Protective index 6, corresponding > 480 minutes of permeation time according to EN 374 Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves' producer. Neoprene or rubber gloves are recommended.

Respiratory protection



**Body protection:**

Wear suitable coveralls to prevent exposure to the skin.

Normally no personal respiratory protection is necessary.

Thermal hazards

Not applicable

**8.2.3 Environmental Exposure Controls**

Avoid release to the environment.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

Appearance	Off-white - Brown Viscous liquid.
Odour	Faint Epoxy Odour
Odour threshold	Not available.
pH	Not established.
Melting point/freezing point	-16 °C (bisphenol-A)
Initial boiling point and boiling range	~320°C (bisphenol-A)
Flash point	>= 264 <= 268°C (bisphenol-A)
Evaporation rate	Not available.
Flammability (solid, gas)	Not relevant - liquid mixture
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	1.27 (H <sub>2</sub> O = 1) (Mixture)
Solubility(ies)	Not available.
Partition coefficient: n-octanol/water	>= 2.64 <= 3.78 log Pow (25 °C) (bisphenol-A)
Auto-ignition temperature	Not applicable.
Decomposition Temperature	>350°C (bisphenol-A)
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not oxidising.

**9.2 Other information**

None.

**SECTION 10: STABILITY AND REACTIVITY**

<b>10.1 Reactivity</b>	Stable under normal conditions.
<b>10.2 Chemical stability</b>	Stable under normal conditions.
<b>10.3 Possibility of hazardous reactions</b>	Stable under normal conditions. Hazardous Polymerization: Will not occur by

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<p><b>10.4 Conditions to avoid</b></p> <p><b>10.5 Incompatible materials</b></p> <p><b>10.6 Hazardous decomposition product(s)</b></p>	<p>itself, but masses of more than 500 grams of product plus an aliphatic amine will cause irreversible polymerization with considerable heat buildup.</p> <p>The product may decompose if heated to temperatures above (°C): 300</p> <p>Keep away from: Oxidizing agents, Avoid contact with acids and alkalis. Amines</p> <p>May decompose in a fire giving off toxic fumes. Phenolic, Carbon monoxide, Carbon dioxide,</p>
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**SECTION 11: TOXICOLOGICAL INFORMATION**

<p><b>11.1 Information on toxicological effects</b></p> <p><b>Acute toxicity - Ingestion</b></p> <p><b>Acute toxicity - Inhalation</b></p> <p><b>Acute toxicity - Skin Contact</b></p> <p><b>Skin corrosion/irritation</b> Polyglycidyl Ether of Phenol-Formaldehyde:</p> <p>reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <math>\leq</math> 700):</p> <p><b>Serious eye damage/irritation</b> Polyglycidyl Ether of Phenol-Formaldehyde:</p> <p>reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <math>\leq</math> 700):</p> <p><b>Respiratory or skin sensitization</b> Polyglycidyl Ether of Phenol-Formaldehyde:</p> <p>reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <math>\leq</math> 700):</p> <p><b>Germ cell mutagenicity</b></p> <p><b>Carcinogenicity</b></p> <p><b>Reproductive toxicity</b></p> <p><b>STOT - single exposure</b></p> <p><b>STOT - repeated exposure</b></p> <p><b>Aspiration hazard</b></p> <p><b>11.2 Other information</b></p>	<p>Based upon the available data, the classification criteria are not met.</p> <p>Acute Toxicity Estimate Mixture Calculation: Estimated LC50 &gt; 2000 mg/kg bw/day.</p> <p>Based upon the available data, the classification criteria are not met.</p> <p>Acute Toxicity Estimate Mixture Calculation: Estimated LC50 &gt;20.0 mg/l.</p> <p>Based upon the available data, the classification criteria are not met.</p> <p>Acute Toxicity Estimate Mixture Calculation: Estimated LC50 &gt; 2000 mg/kg bw/day.</p> <p>Skin Irrit. 2; Causes skin irritation.</p> <p>Skin Irrit. 2; H315</p> <p>No data. EU classification and labelling inventory</p> <p>Skin Irrit. 2; H315 Harmonised Classification</p> <p>No data.</p> <p>Eye Irrit. 2; Causes serious eye irritation.</p> <p>Eye Irrit. 2; H319</p> <p>No data. EU classification and labelling inventory</p> <p>Eye Irrit. 2; H319 Harmonised Classification</p> <p>No data.</p> <p>Skin Sens. 1; May cause an allergic skin reaction.</p> <p>Skin Sens. 1; H317</p> <p>No data. EU classification and labelling inventory</p> <p>Skin Sens. 1; H317 Harmonised Classification</p> <p>No data.</p> <p>Based upon the available data, the classification criteria are not met.</p> <p>Based upon the available data, the classification criteria are not met.</p> <p>Based upon the available data, the classification criteria are not met.</p> <p>Based upon the available data, the classification criteria are not met.</p> <p>Based upon the available data, the classification criteria are not met.</p> <p>Based upon the available data, the classification criteria are not met.</p> <p>None known.</p>
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**SECTION 12: ECOLOGICAL INFORMATION**

<p><b>12.1 Toxicity</b></p> <p>Polyglycidyl Ether of Phenol-Formaldehyde:</p> <p>reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <math>\leq</math> 700):</p> <p><b>12.2 Persistence and degradability</b> Polyglycidyl Ether of Phenol-Formaldehyde: reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <math>\leq</math> 700):</p> <p><b>12.3 Bioaccumulative potential</b> Polyglycidyl Ether of Phenol-Formaldehyde: reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <math>\leq</math> 700):</p> <p><b>12.4 Mobility in soil</b> Polyglycidyl Ether of Phenol-Formaldehyde: reaction product: bisphenol-A-(epichlorhydrin) epoxy</p>	<p>Aquatic Chronic 2; Toxic to aquatic life with long lasting effects.</p> <p>Estimated LC50 (Mixture): &gt; 1 to <math>\leq</math> 10 mg/l.</p> <p>Aquatic Chronic 2; H411</p> <p>No data. EU classification and labelling inventory</p> <p>Aquatic Chronic 2; H411 Harmonised Classification</p> <p>No data.</p> <p>No data for the mixture as a whole.</p> <p>No data.</p> <p>Little or no biodegradation has been observed (OECD 301F)</p> <p>No data for the mixture as a whole.</p> <p>No data.</p> <p>No data.</p> <p>The product is predicted to have low mobility in soil.</p> <p>No data.</p> <p>The substance is predicted to have low mobility in soil. Slightly soluble in: Water</p>
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resin (number average molecular weight  $\leq$  700):

12.5	<b>Results of PBT and VPvB assessment</b>	Not classified as PBT or vPvB.
12.6	<b>Other adverse effects</b>	None known.

**SECTION 13: DISPOSAL CONSIDERATIONS**

13.1	<b>Waste treatment methods</b>	Dispose of this material and its container as hazardous waste. Send after pre-treatment to a appropriate hazardous waste incinerator facility according to legislation.
13.2	<b>Additional Information</b>	Dispose of contents in accordance with local, state or national legislation.

**SECTION 14: TRANSPORT INFORMATION**

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA/ICAO</b>
14.1	<b>UN number</b>	UN3082	UN3082
14.2	<b>UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Polyglycidyl Ether of Phenol-Formaldehyde)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Polyglycidyl Ether of Phenol-Formaldehyde)
14.3	<b>Transport hazard class(es)</b>	9	9
14.4	<b>Packing group</b>	III	III
14.5	<b>Environmental hazards</b>	Environmentally hazardous substance	Classified as a Marine Pollutant.
14.6	<b>Special precautions for user</b>	See Section: 2	Environmentally hazardous substance
14.7	<b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable	

**SECTION 15: REGULATORY INFORMATION**

15.1	<b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>	
15.1.1	<b>EU regulations</b> Authorisations and/or Restrictions On Use CoRAP Substance Evaluation	Not restricted bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight $\leq$ 700): Substance evaluated in 2015; evaluating Member State has proposed to ask the registrants to provide further information
15.1.2	<b>National regulations</b> Germany	Water hazard class: 2
15.2	<b>Chemical Safety Assessment</b>	A chemical safety assessment is not required under REACH.

**SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements: New SDS Regulation 2015/830 format, all sections have been updated to include new information. Please review SDS with care.

**References:**

Existing Safety Data Sheet (SDS), Harmonised Classification and Existing ECHA registration(s) for reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight  $\leq$  700) (CAS No. 25068-38-6) and the Classification and Labelling Inventory for Polyglycidyl Ether of Phenol-Formaldehyde (CAS No. 28064-14-4)

EU Classification: This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830.

<b>Classification of the substance or mixture According to Regulation (EC) No. 1272/2008 (CLP)</b>	<b>Classification Procedure</b>
Skin Irrit. 2; H315	Threshold Calculation
Skin Sens. 1; H317	Threshold Calculation
Eye Irrit. 2; H319	Threshold Calculation

# SAFETY DATA SHEET



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Aquatic Chronic 2; H411	Summation Calculation
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### LEGEND

LTEL: Long Term Exposure Limit

DNEL: Derived No Effect Level

PBT: PBT: Persistent, Bioaccumulative and Toxic

STEL: Short Term Exposure Limit

PNEC: Predicted No Effect Concentration

vPvB: very Persistent and very Bioaccumulative

### Hazard classification / Classification code:

Skin Irrit. 2; Skin corrosion/irritation, Category 2

Skin Sens. 1; Skin Sensitisation, Category 1

Eye Irrit. 2; Eye Irritation, Category 2

Aquatic Chronic 2; Hazardous to the aquatic environment, Chronic ,  
Category 2

### Hazard Statement(s)

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H411: Toxic to aquatic life with long lasting effects.

### Disclaimers

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